



**SAURASHTRA NARMADA AVATARANA IRRIGATION
YOJANA (SAUNI)**



GOVERNMENT OF GUJARAT
NARMADA, WATER RESOURCES, WATER SUPPLY
& KALPSAR DEPARTMENT

INTRODUCTION:

Gujarat State covers a geographical area 196 Lacs Ha. and has a population of 60.40 Million according to Census Report - 2011. The total cultivable land is about 124 Lacs Ha., out of which only 63.50 Lacs Ha receives irrigation from all sources and remaining area which is about 50 % is wholly dependent on vagaries of monsoon.

On the basis of physiology and culture, Gujarat state can be divided into several regions such as Kutch, Saurashtra, North Gujarat, Central Gujarat and South Gujarat. Gujarat is a water scarce state and has vast variation in rainfall even within the region. State's natural water resources distribution is highly unequal. Central and South Gujarat region has more surface water availability, while Saurashtra, Kutch and North Gujarat region faces scarcity almost every three years interval period. Similarly, some parts face floods during monsoon, at the same time several other parts are drought affected. Such imbalance in water resources leads to imbalance in development in certain areas of the state.

To minimize the imbalance of water distribution, Narmada, Water Resources, Water Supply and Kalpsar Department (NWRWS&K) has identified 3MAF (Million Acre Feet) of surplus Narmada water to be utilized for command area development by augmenting the water yields of various reservoirs in the Saurashtra, Kutch, and North Gujarat region in the state of Gujarat. This surplus water may be available in about 100 days in monsoon period.

WATER RESOURCES:

The total water resources of Saurashtra are 9700 MCM of which surface water is 3600 MCM and ground water is 6100 MCM, that constitutes 17 % of the total water resource of the state of Gujarat. Saurashtra has 71 river basins out of the 185 river basins of the state. There is no perennial river in Saurashtra. The perennial rivers are located in only 20% area of the state particularly in South Gujarat region which accounts for the 80 % of the surface water of the state. The dams in Saurashtra have been designed at 50 % reliability instead of the conventional 75 % reliability. So that at least protective irrigation can be given to Kharif crops. Also the water of 35 main dams is being reserved for drinking purpose, apart from the convention dams variety of other schemes suitable to the region are launched and mostly completed viz. Sardar Patel Participatory Irrigation Yojana, cutting canal systems, Salinity Ingress Prevention Projects, Deepening of Ponds, Khet Talavadies (Field Pond).

EFFORTS FOR HARNESSING WATER:

Intensive efforts to harness the rain water of Saurashtra in the form of construction of 450 major, medium and minor irrigation dams, 63000 checkdams, 73000 farm ponds etc. have been made but they could address the issue partly. Some larger intervention was still required to enhance the situation. As the dams are reported to have insufficient water storage due to poor monsoon every year, reliability of the reservoirs were planned to be ensured by inter-basin transfer of water from other parts of Gujarat which receive more than required rainfall and have perennial basins with surplus water of Narmada flowing to sea.

OBJECTIVE OF THE PROJECT:

Government of Gujarat has allocated and planned to use additional 1 MAFT (1 Million Acre Feet) i.e. 43,500 Mc.ft. (Million Cubic Feet) flood water of Narmada River for Saurashtra region to supplement about 115 existing dams selected based on the deficit storage study for last 10 years in the interest of the agriculture and domestic water supply for the people in the region. The project is known as [“Saurashtra Narmada Avataran Irrigation Yojna”](#). The main objective of the project is to increase productivity of land by providing assured protective irrigation and supplying water for drinking purpose to more than 1 Crore population of Saurashtra region.

PROJECT CONSISTS OF 4 LINKS (PIPE LINES) AS UNDER:

LINK-1: -From Machhu-2 dam of Morbi District to Sani Dam of Devbhumi Dwarka District. (208 K.M.).

LINK-2: -From Limbadi Bhogavo-2 dam of Surendranagar district to Raydi dam of Amreli district. (299 K.M.).

LINK-3: -From Dholidhaja dam of Surendranagar district to Venu-1 Dam of Jamnagar District. (299 K.M.).

LINK-4: -From Limbadi Bhogavo-2 dam of Surendranagar district to Hiran-2 Dam of Gir Somnath District. (565 K.M.).

The Administrative approval for this project amounting Rs. 18563 crores. In above four link, 1371 kms pipeline is proposed and area benefited is 8,25,000 acres of existing 115 reservoirs command of 11 District.

SAUNI YOJANA PHASE-I:

- **The phase-I work started in April-2014 to strengthen irrigation facility in 1,66,005-acre area of 16 reservoirs and provide Drinking and Domestic water to 5 urban centers.** First phase of SAUNI Yojana is already commissioned and 16 reservoirs are connected.
- The cost of Phase-I work is Rs. 6761 Crore.
- 10 feet diameter twin pipelines of 231 Km. have been laid in Phase-I.

SAUNI YOJANA PHASE-II:

- Sauni Yojana Phase-II is implemented in the year 2017 to strengthen irrigation facility of 57 existing reservoirs **to benefit about 3,77,851-acre command area and to provide drinking and domestic water to 14 urban centers through 16 reservoirs**
- The cost of Phase-II work is Rs. 6474 Crore.
- One Package of Phase-II work connecting Machchhu-I to Aji-I reservoir and water supply to Aji-1 Reservoir from 2017 and provided Drinking Water Supply to Aji-I Reservoir which is a main source for Rajkot city.
- After completion of Phase-II, Water supply to Aji-1, Nyari-1, Veri, Bhadar-1, Ranjitsagar, Malpara, Kalubhar and Setrunji Reservoirs.
- Drinking and domestic water facility will be provided to Jamnagar, Lalpur, Khambhaliya, Kalyanpur, Gadhada, Umarala, Palitana, Bhavnagar, Rajkot, Padadhari, Jamkandorana, Jasdan, Gondal and Dhoraji city in Phase-II
- 529 Km Pipeline have been laid in Phase-II.

SAUNI YOJANA PHASE-III:

- The Phase-III works are under progress and will strengthen irrigation facility in 2,43,000-acre area of 42 reservoirs.
- 610.00 km length of pipeline is planned to be laid in Phase-III works.
- The cost of Phase-III work is about Rs. 2956 Crore.
- Bor Talav of Bhavnagar city is included in the phase-III works & in year-2021, Narmada water has also been supplied to Bor Talav through Sauni Yojana.
- Total 10 Packages included in Phase-III, in which 6 Packages are completed and remaining packages are under progress.